

Application No. 09/641,930

26. The method of processing a plurality of transport streams of claim 16 wherein the step of extracting video data comprises the step of extracting at least one HDTV video.

27. A system comprising:

a core transport processor for receiving a plurality of compressed data streams;

a satellite transport processor for receiving at least one of the compressed data streams and for extracting video data, the video data including a plurality of SLICES;

an MPEG-2 video decoder for decoding the video data to generate decoded video data; and

a video compositor for blending the decoded video data with graphics,

wherein the satellite transport processor generates a start code table to index the video data and aligns the plurality of SLICES to a suitable boundary.

28. The system of claim 27 wherein the core transport processor, the satellite transport processor, the MPEG-2 video decoder and the video compositor are integrated on an integrated circuit chip.

29. The system of claim 27 wherein the video data include SDTV video data.

30. The system of claim 27 wherein the video data include HDTV video data.

REMARKS

Claims 1-30 remain in the present application, of which claims 1, 2, 3, 16 and 27 are independent. Claims 1, 2 and 25 have been amended. Applicants appreciate the allowance of claims 3-24 and 26-

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30, and the indication that claim 2 would be allowable if written in independent form. Applicants respectfully request reconsideration, reexamination and allowance of claims 1, 2 and 25, in addition to the allowed claims 3-24 and 26-30.

Applicants appreciate the Examiner's acknowledgment that a number of information disclosure statements have been considered and also mailing of the signed copies. Applicants also appreciate the indication that disclosure statements mailed on 9/3/02 and on 12/9/02 are missing. Applicants have filed a total of eight (8) Information Disclosure Statements, including the first two IDSs (neither of which indicates "supplemental") and first through sixth supplemental IDSs. Of these, applicants have received from the Examiner signed and initialed copies of the first two IDSs and first, fifth and sixth supplemental IDSs.

Applicants do not have copies of signed and initialed Forms PTO/SB/08A/B for: 1) Second Supplement IDS and Form PTO/SB/08A/B mailed August 29, 2002; 2) Third Supplemental IDS and Form PTO/SB/08A/B mailed September 23, 2002; and 3) Fourth Supplemental IDS and Form PTO/SB/08A/B mailed October 10, 2002. Applicants submit herewith copies of the above-referenced IDSs and Forms PTO/SB/08A/B as requested by the Examiner. Applicants respectfully request that the Examiner consider, if they have not been considered already, the references cited therein, copies of which have been provided to the Patent Office, and enter copies of the signed and initialed Forms PTO/SB/08A/B in the application file, and return copies thereof along with the next communication from the Patent Office.

The Examiner has objected to claim 2 because of the following alleged informalities: "aligning the start of SLICES to . . ." in lines 3-4. The Examiner has also objected to claim 2 as being dependent upon a rejected base claim, but has indicated that it would be allowable if rewritten in independent form to overcome the Examiner's objection and to include all of the limitations of the base

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claim and any intervening claims. Applicants have rewritten claim 2 in independent form and also amended the rewritten claim 2 to overcome the Examiner's objection. Therefore, applicants respectfully request that the objection of claim 2 be withdrawn and that claim 2 be allowed.

The Examiner has rejected claim 1 under 35 U.S.C. § 103(a) as allegedly being unpatentable over U.S. Patent No. 5,923,385 to Mills et al. ("Mills") in view of U.S. Patent No. 6,134,378 to Abe et al. ("Abe"). As the Examiner admits, "Mills fails to disclose the means for generating a start code table to index the video data stored in the external memory." However, the Examiner states that Abe "teaches the means (26, fig. 3) for storing video data in an external memory (35, fig. 3) and the means (61 and 62 of fig. 3) for generating a start code table (i.e., time code management table of item 61 of fig. 3) to index the video data (i.e., the material information regarding recorded video data D60 or D61 for news program production broadcasting system 20) stored in the external memory (35)," and cites col. 17, lines 35-55 of Abe.

However, according to the drawings and the portion of the specification cited by the Examiner, the index data in Abe includes such information as the date of photo shooting, the model name of the camcorder, the serial number, the cassette number and the place of photo shooting. As those skilled in the art would recognize, the MPEG start codes in an exemplary embodiment according to the present invention pertain to the hierarchical layers of the MPEG video data. Such MPEG start codes are stored in a table and used to access the MPEG video data during decoding of the MPEG video data in the exemplary embodiment of the present invention, and are clearly different from the index data disclosed in Abe.

For example, the Examiner states "such a modification would provide the processing system of Mills the capability to easily set control information easily set without the operator's entering it."

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However, as MPEG start codes are typically not entered by an operator during the encoding or decoding process, such "advantage" (i.e., without operator's entering it) allegedly gained by combining Abe with Mills would not have been obvious at all at the time of the present invention to those skilled in the art.

Claim 1 recites, in a relevant portion, "means for extracting MPEG video data from the compressed data streams; means for storing the MPEG video data in an external memory; and means for generating a table of MPEG start codes to index the MPEG video data stored in the external memory, wherein said table of MPEG start codes is used to access the MPEG video data in the external memory during decoding of the MPEG video data." This combination is not taught or suggested by Mills and Abe, either individually or jointly together. Therefore, applicants respectfully submit that claim 1 is patentably distinguishable over Mills and Abe, and respectfully request that the rejection of claim 1 be withdrawn and that it be allowed.

The Examiner has rejected claim 25 under 35 U.S.C. § 112, second paragraph, as allegedly being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The Examiner has also indicated that claim 25 would be allowable if rewritten to overcome the rejection under 35 U.S.C. § 112, second paragraph. Applicants have amended claim 25 as required by the Examiner. Therefore, applicants respectfully request that the rejection of claim 25 be withdrawn and that it be allowed.

In view of the foregoing amendments and remarks, applicants respectfully request allowance of claims 1, 2 and 25 in addition to the allowed claims 3-24 and 26-30 and an early issuance of a patent. If there are any remaining issues that can be addressed over the telephone, the Examiner is invited to call applicants' attorney at the number listed below.


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Attached hereto is a marked-up version of the changes made to the above-identified application by the current amendment. The attached page is captioned "Version with markings to show changes made."

Respectfully submitted,

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By



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626/795-9900

JEJ/sd

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VERSION WITH MARKINGS TO SHOW CHANGES MADE

In the Specification:

On page 1, lines 13-31, please replace with the following paragraph:

The present application contains subject matter related to the subject matter disclosed in U.S. patent application number 09/641,374 [] entitled "Video, Audio and Graphics Decode, Composite and Display System," U.S. patent application number 09/641,936 [] entitled "Video and Graphics System with an MPEG Video Decoder for Concurrent Multi-Row Decoding," U.S. patent application number 09/643,223 [] entitled "Video and Graphics System with MPEG Specific Data Transfer Commands," U.S. patent application number 09/640,870 [] entitled "Video and Graphics System with Video Scaling," U.S. patent application number 09/640,869, now U.S. Patent No. 6,538,656, issued on March 25, 2003 [] entitled "Video and Graphics System with a Data Transport Processor," U.S. patent application number 09/641,935 [] entitled "Video and Graphics System with Parallel Processing of Graphics Windows," U.S. patent application number 09/642,510 [] entitled "Video and Graphics System with a Single-Port RAM [Used Similarly as a Dual-Port RAM]," and U.S. patent application number 09/642,458 [] entitled "Video and Graphics System with an Integrated System Bridge Controller," all filed August 18, 2000.

In the Claims:

1. (Amended) A video transport processor comprising:
an input for receiving one or more compressed data streams;
means for extracting MPEG video data from the compressed data streams;

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means for storing the MPEG video data in an external memory;
and

means for generating a [start code] table of MPEG start codes to index the MPEG video data stored in the external memory,

wherein said table of MPEG start codes is used to access the MPEG video data in the external memory during decoding of the MPEG video data.

2. (Amended) ~~[The video transport processor of claim 1]~~

A video transport processor comprising:

an input for receiving one or more compressed data streams;

means for extracting video data from the compressed data streams;

means for storing the video data in an external memory; and

means for generating a start code table to index the video data stored in the external memory,

wherein the video data includes MPEG-2 video data comprising a plurality of SLICES, and the video transport processor further comprises means for aligning [the] a start of said plurality of SLICES to a suitable boundary in the external memory when storing the MPEG-2 video data in the external memory.

25. (Amended) The method of processing a plurality of transport streams of claim 17 wherein the step of storing the video data comprises the step of aligning [the] a start of each of the plurality of SLICES to a suitable boundary in the memory block.

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